





Leveraging NASA's Unique Contributions in STEM Education

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"I have an Amazing Brain"





But why is the brain so amazing?

- The human brain is like a powerful computer that stores our memory and controls how we think and react.
- Humans continue to [make new neurons](#) throughout life in response to mental activity.
- Your brain stops growing at age 18.
- You can train it!!!



"You have an Amazing Brain"

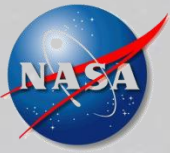




What do we do now?

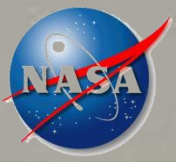
- Shuttle is Retired
- Constellation Program





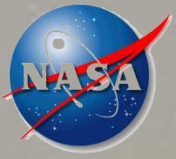
James Webb Telescope





Orion Capsule





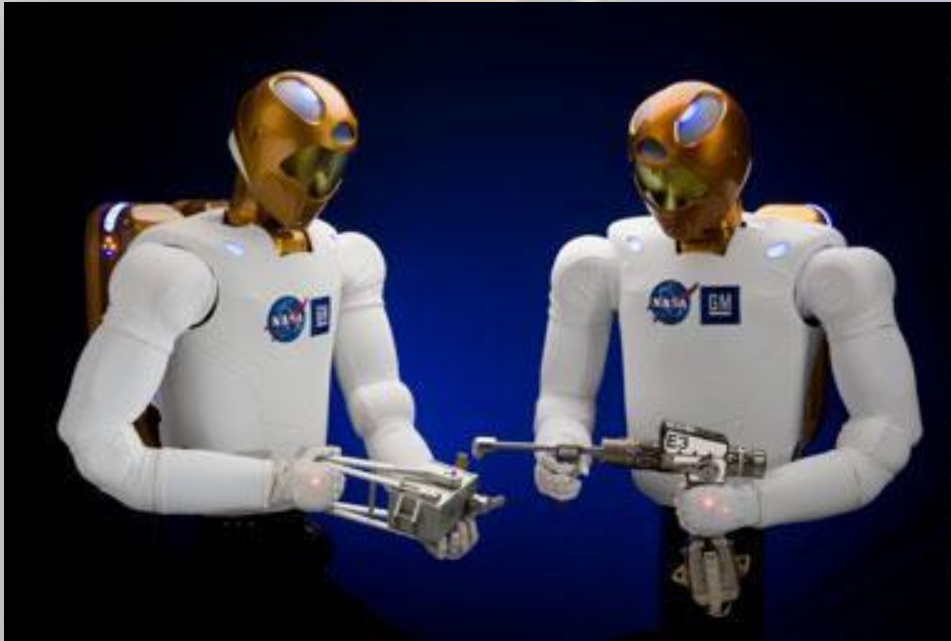
Engineering New Things

Orion Capsule





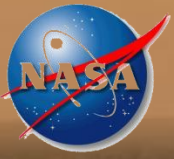
Partnerships



NASA



General Motors



Solving Problems

MARS Science Laboratory "Curiosity"



NASA Missions Inspire Spinoffs...

Benefiting Society



Cordless Tools



CAT Scanners



Water Purification



Memory Foam



Smoke Detectors



Mammograms



Invisible Braces

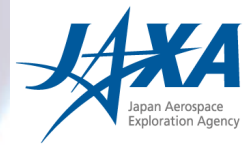
2011

NASA EDUCATION

Vision Statement:
*To advance **high quality STEM** education using **NASA's unique capabilities***



STEM Partnerships- Reaching Learners, Educators and Institutions



NASA Education Spinoffs



Inspiring Educational Video Games

NASA provided funding to develop an online video game to help inspire the next generation of scientists, engineers, and explorers. The game requires players to use robots and other tools to restore life support on the Moon. It has been downloaded nearly 300,000 times, and an expanded version is in the works.

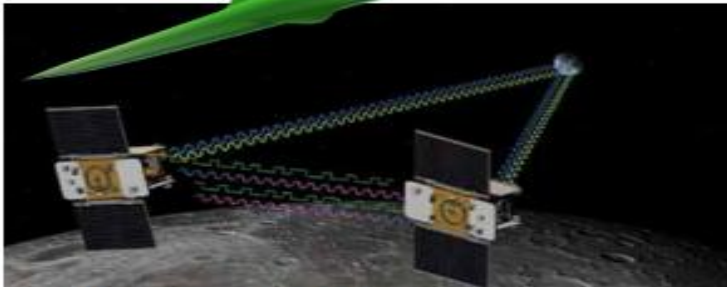


Expanding Research Capabilities

To assist in research on how to improve solar cells, NASA scientists devised a new way to grow high-quality carbon nanotubes. Today, the technology supports the incorporation of carbon nanotubes into education curricula and research, and is in use by students at a number of universities.

Teaching Aeronautics with Ease

An educational software product designed by NASA is bringing actual aeronautical work by NASA engineers to the public in an interactive format to introduce future generations of engineers to the fundamentals of flight. Educators and students use the commercially available software to better teach and understand aeronautics.



Bringing Space to the Classroom

Offering Schools Affordable Space Research

Using unique research platforms, a NASA partner allows high school and university students a rare opportunity to conduct scientific experiments onboard the International Space Station. The company has also partnered with a national education organization to create a related curriculum.



Exploring through Imagery

Technology for imaging the landscapes of Mars became a remarkable spinoff allowing students to zoom into exquisitely detailed panoramic photos, zeroing in on a single tree leaf in a broad swath of forest, or the finest details of an ant's leg.

Putting the Earth in Students' Hands

A NASA partner employs satellite data to create inflatable globes that depict Earth as seen from space, complete with cloud cover. The globes have educational uses from preschools to universities and for a variety of display purposes at conferences, trade shows, festivals, concerts, and parades.





What NASA Programs can you Leverage for 21st CCLC?

STEM Activities on the ISS

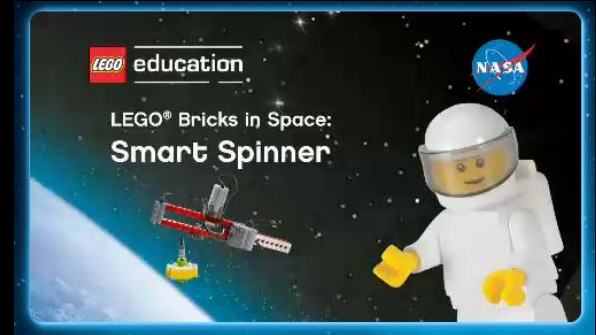
ISS Downlinks



Youtube Space Lab



LEGO

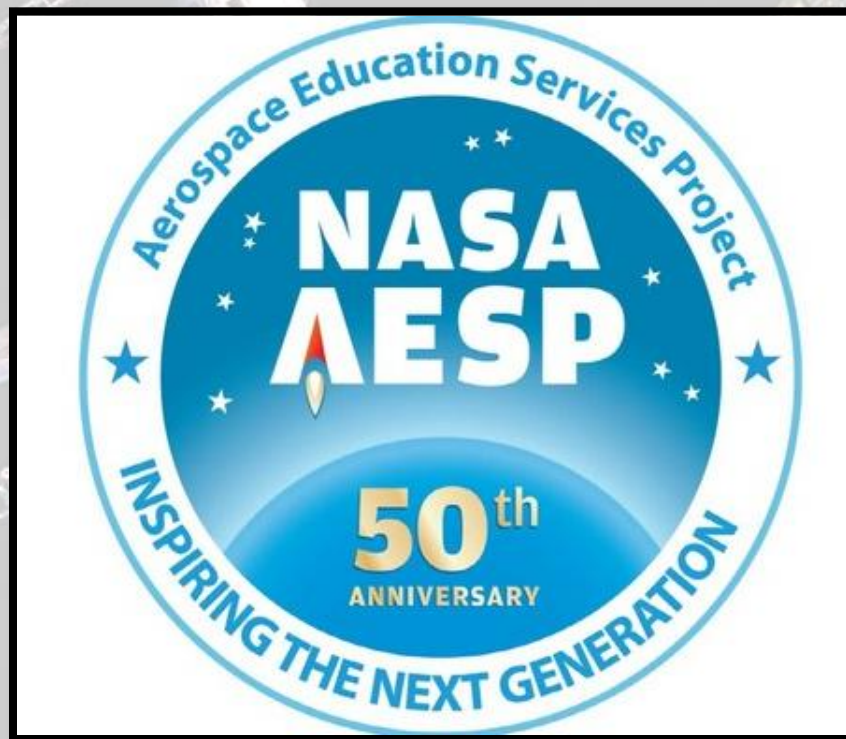


SPHERES





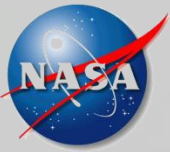
NASA Aerospace Education Services Project





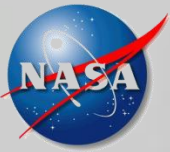
FIRST ROBOTICS





NASA's Digital Learning Network

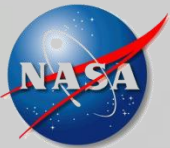




AfterSchool Universe

BRINGING THE UNIVERSE DOWN TO EARTH





Summer of Innovation







"I have an Amazing Brain"



